

REMARKS

This paper is responsive to any paper(s) indicated above, and is responsive in any other manner indicated below.

PENDING CLAIMS

Claims 1 and 4-26 were pending, under consideration and subjected to examination in the Office Action. Appropriate claims have been amended, canceled and/or added (without prejudice or disclaimer) in order to adjust a clarity and/or focus of Applicant's claimed invention. That is, such changes are unrelated to any prior art or scope adjustment and are simply refocused claims in which Applicant is present interested. At entry of this paper, Claims 1 and 4-26 will be pending for further consideration and examination in the application.

REJECTION UNDER 35 USC '103

The 35 USC '103 rejection of claims 1, 4-26 as being unpatentable over Matsumoto et al. (U.S. Patent 5,796,428) in view of Kobayashi (U.S. Patent 6,108,728) and Miike et al. (U.S. Patent 5,787,414) is respectfully traversed. However, such rejections have been rendered obsolete by the present clarifying amendments to

Applicant's claims, and accordingly, traversal arguments are not appropriate at this time. However, Applicant respectfully submits the following to preclude renewal of any such rejections against Applicant's clarified claims.

All descriptions of Applicant's disclosed and claimed invention, and all descriptions and rebuttal arguments regarding the applied prior art, as previously submitted by Applicant in any form, are repeated and incorporated hereat by reference. Further, all Office Action statements regarding the prior art rejections are respectfully traversed. As additional arguments, Applicant respectfully submits the following.

Applicant's disclosed and claimed invention is directed to an improved arrangement which can be used to manage a large number of **separately-stored still image** files (or documents) arranged into a group (i.e., collection), while at the same time, allowing **fast searches** with respect to the group, and **only requiring a small amount of memory resources** to store **group management information**. More particularly, in the art, when a digital camera takes still pictures, individual still pictures are stored within **separate computer files**, and/or data of **all** the pictures may be accumulated and stored together **within a common table or database**. Applicant's invention may be used to divide a plurality of separately-stored still image files into different **groups**, e.g., by forming a **new group for every 64 still pictures**. If a search for a picture based upon a picture's origination (i.e., production) time is performed with respect to the group, and if the search was required to compare against a start-time and/or end-time **for each picture**, whether by using the individual pictures or by using

the common table or database (which stores data for **ALL pictures**), searching may be **onerous**, i.e., take a **long processing time** to perform the comparison with each picture's data, and a large memory would be required to store the start-time and/or end-time **for each picture**.

In order to allow quicker searching with respect to a group, and in order to afford the opportunity to reduce an amount of memory required for management information, Applicant's disclosed and claimed invention, using independent claim 1 as an example, includes an arrangement where "said **still picture group management information** is **provided SEPARATELY from any still picture management information containing management information for each still picture**, and said still picture group management information has **a data area for storing time data which specifies time information including ONLY a first recording time at which the still picture data of an earliest-photographed still picture in said still picture group was recorded first by a picture-taking device, and a last recording time at which the still picture data of a latest-photographed still picture in said still picture group was recorded last by the picture-taking device**".

[continued next page]

As argued in Applicant's prior papers, Applicant's **"still picture GROUP management information"** is **"provided SEPARATELY from any STILL PICTURE**

management information containing

management information **for EACH STILL**

PICTURE". See Applicant's **"VOB map" 6**

(**group** info) in comparison to **"VOB File" 11**

(**still picture** info) in Applicant's **FIG. 1,**

reproduced herewith for convenience.

Applicant's claimed **"still picture group**

management information" includes Applicant's

claimed **"a data area** for storing time data

which specifies ONLY a first recording time at which the still picture data of an

earliest-photographed still picture in said still picture group was recorded first by

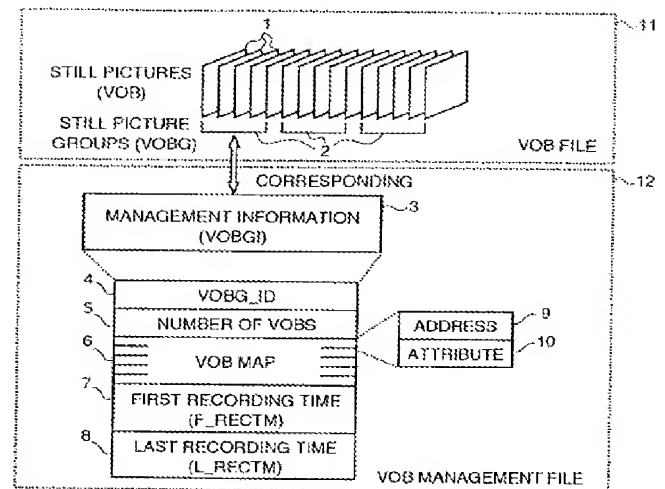
a picture-taking device, and **a last recording time at which the still picture data of a**

latest-photographed still picture in said still picture group was recorded last by

the picture-taking device". See **FIG. 1's "First Recording Time (F_RECTM)" 7 and**

"Last Recording Time (L_RECTM)" 8 areas.

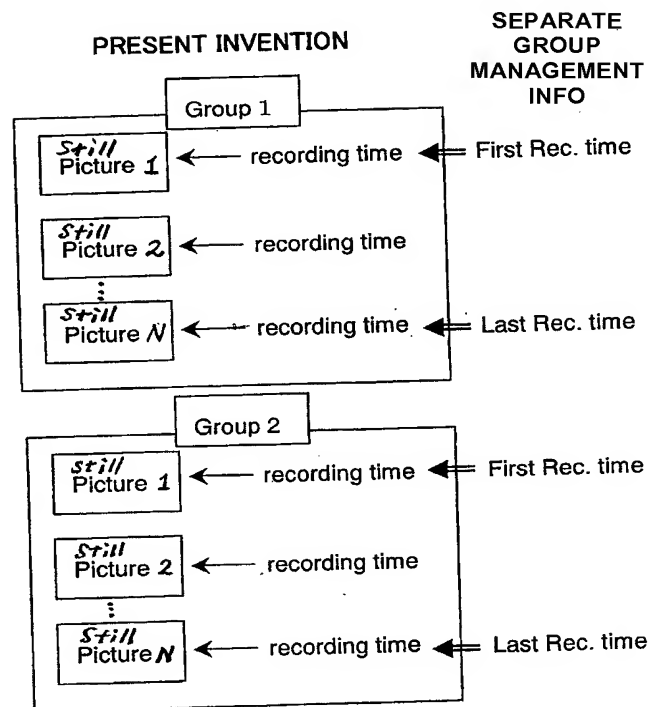
FIG. 1



If two groups of still pictures were to be formed, a representation of such groups via **Applicant's invention** might be shown by the following sketch. Again, Applicant's invention can reduce an amount of memory required for group management information if "**ONLY** the first recording time at which the still picture data of an earliest-photographed still picture in said still picture group was recorded first by a picture-taking device, and a last recording time at which the still picture data of a latest-photographed still picture in said still picture group was

recorded last by the picture-taking device" **is included**, but the recording time for other (non-first, non-last) individual pictures **is excluded** (see claims 9, 11, 13, for example).

In terms of **distinguishing features/limitations**, Applicant's independent claim 1 (taken as an example), recites: "1. (Previously Presented) A method for playing back a storage medium storing still picture data of **N still pictures stored in separate N files**, respectively, and **still picture group management information for managing said still picture data of said N still pictures as a still picture group**, where N is an integer number equal to or larger than one, **wherein said still picture group management information is provided SEPARATELY FROM any still picture**



management information containing management information for each still

picture, and said still picture group management information has a data area for storing time data which specifies **time information INCLUDING ONLY a first recording time at which the still picture data of an earliest-photographed still picture in said still picture group was recorded first by a picture-taking device**, and **a last recording time at which the still picture data of a latest-photographed still picture in said still picture group was recorded last by the picture-taking device**, said method comprising: receiving an entry of a predetermined time of interest regarding still pictures recorded by the picture-taking device; **comparing said predetermined time with said first and last recording times stored in said still picture group management information**; and **selectively playing back the still picture data belonging to said still picture group satisfying a condition in which said predetermined time is equal to or later than said first recording time and equal to or earlier than said last recording time**.” Other independent claims have similar or analogous

features/limitations. Independent claims of added claims 18-20 (paralleling other independent claims) use “consists of” language in replacement of “only”, and thus also contain similar or analogous features/limitations.

Turning now to rebuttal of the **Matsumoto et al.** reference, it is respectfully submitted that Matsumoto et al. does disclose arrangements for grouping image data into “**album groups**”, “**page lists**”, “**picture lists**”, etc. However, Office Action comments **ADMIT** that Matsumoto is **deficient** in that it **fails to disclose the still**

picture group management information only storing the earliest and last recording times and updating either one of those if it needs [to be] updated.

Applicant respectfully agrees with such admission. More particularly, nowhere does Matsumoto et al.'s "**album groups**", "**page lists**" or "**picture lists**" include Applicant's claimed limitations, "said **still picture group management information** is **provided SEPARATELY from any still picture management information containing management information for each still picture**, and said still picture group management information has **a data area for storing time data which specifies time information including ONLY a first recording time at which the still picture data of an earliest-photographed still picture in said still picture group was recorded first by a picture-taking device, and a last recording time at which the still picture data of a latest-photographed still picture in said still picture group was recorded last by the picture-taking device**". In fact, Matsumoto's "**album groups**", "**page lists**" and "**picture lists**" appear NOT to contain any type of group management info **provided separate from** picture management info and having only a recording start/time time which are attributed to first/last pictures.

That is, in each of Matsumoto's embodiments and illustrations (e.g., **FIGS. 11** and **28** reproduced herewith for convenience), Matsumoto et al.'s picture date/time is intermingled with (i.e., NOT PROVIDED SEPARATELY FROM) "any STILL PICTURE management information" containing management information for EACH STILL PICTURE", and/or does not have "ONLY a first recording time ...and a last recording time" for a group of pictures.

FIG. 11

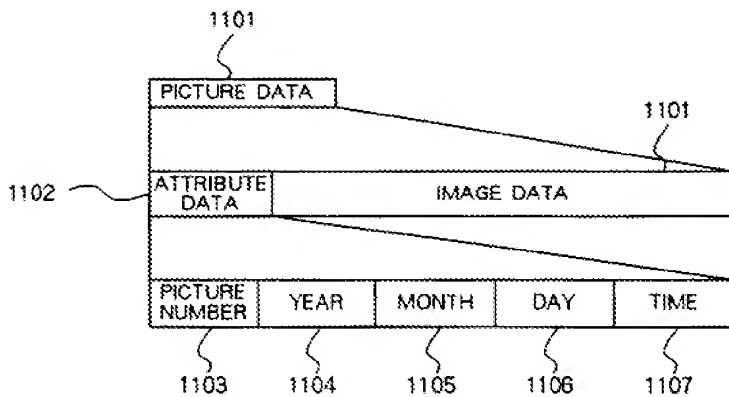


FIG. 28

| PICTURE NUMBER | SHOOTING YEAR | SHOOTING MONTH | SHOOTING DAY | SHOOTING TIME | SHOOTING ATTITUDE |
|----------------|---------------|----------------|--------------|---------------|-------------------|
| 01 | 92 | 12 | 21 | 1344 | 0 |
| 02 | 92 | 12 | 24 | 2132 | 0 |
| 03 | 92 | 12 | 24 | 2150 | 0 |
| 04 | 92 | 12 | 24 | 2210 | 90 |
| 05 | 92 | 12 | 25 | 0753 | 0 |
| 06 | 92 | 12 | 28 | 0926 | 0 |
| 07 | 93 | 01 | 01 | 0534 | 0 |
| 08 | 93 | 01 | 01 | 0627 | 90 |
| 09 | 93 | 01 | 01 | 1009 | 0 |
| 10 | 93 | 01 | 01 | 1013 | 0 |
| 11 | 93 | 01 | 02 | 1326 | 0 |
| 12 | 93 | 01 | 02 | 1342 | 0 |
| 13 | 93 | 01 | 02 | 1447 | 0 |
| 14 | 93 | 01 | 13 | 1022 | 0 |
| 15 | 93 | 01 | 13 | 1635 | 270 |
| 16 | 93 | 01 | 13 | 1822 | 0 |
| 17 | 93 | 01 | 14 | 0855 | 0 |
| 18 | 93 | 01 | 14 | 1042 | 0 |
| 19 | 93 | 01 | 14 | 1155 | 90 |
| 20 | 93 | 01 | 14 | 1331 | 0 |
| 21 | 93 | 01 | 14 | 1911 | 90 |
| 22 | 93 | 01 | 14 | 2033 | 0 |
| 23 | 93 | 01 | 15 | 1125 | 0 |
| 24 | 93 | 01 | 15 | 1356 | 0 |
| 25 | 93 | 02 | 05 | 1013 | 0 |
| 26 | 93 | 02 | 06 | 0832 | 0 |

In an attempt to cure the major deficiency of Matsumoto, the Office Action rejection further cites Kobayashi. In traversal, it is respectfully submitted that the Kobayashi reference is IRRELEVANT to the present application because Kobayashi is directed to VIDEO program environment (as opposed to still picture

environment). That is, one skilled in the still picture art to which the present invention is directed, **would have considered Kobayashi to be not particularly relevant to the present invention, i.e., the still picture art.** While Office Action comments allege that Kobayashi (e.g., FIG. 4; col. 8, lines 50-68) discloses a video data table 48 storing a “recording start time 66” and a “recording end time 68”, it is respectfully noted that **each video program is not stored as individual pictures, but instead is stored as a massive DATA STREAM (encoded by MPEG1 or MPEG2; see Kobayashi’s paragraph [00012] for example) designated by a recording start time and recording end time.** That is, unlike still pictures which each have their own recording times, **each Kobayashi video program is a massive DATA STREAM entity having one recording start time and one recording end time.** Hence, Kobayashi’s video program is not a group of still picture images stored **in separate computer files.** That is, Kobayashi et al.’s DATA STREAM isn’t characterizable as a plurality of separate pictures, and instead is a massive intermingled encoded DATA STREAM (e.g., having macroblocks, etc.) useable to reconstruct the VIDEO. Kobayashi et al. made no effort to group any separately stored still pictures (in separate computer files) to compile a group of still pictures as a video program, but instead, is a simple DATA STREAM recording of video programs.

Rather than being directed to a group of still pictures, instead, Kobayashi et al.'s FIG. 4 teaches a group of video programs. As such, it is respectfully noted that Kobayashi's FIG. 4, does not illustrate a SINGLE recording start time and recording end time, but instead, appears to illustrate FIVE (5) different video programs (i.e., five computer file entities), EACH WITH ITS OWN RECORDING START TIME AND RECORDING END TIME (i.e., Kobayashi et al. is doing nothing but indexing all its video programs). In order for Kobayashi to be like Applicant's present invention, FIG. 4 would have to illustrate only a single recording start time and single recording end time for the group of five (5) different video programs.

Basically, the primary Matsumoto et al. reference teaches keeping a recording time for each computer file entity (i.e., still picture in Matsumoto et al.'s context), and Kobayashi similarly teaches keeping a recording start time and a recording end time for each data stream entity (i.e., video program in Kobayashi's context).

It is respectfully submitted that one skilled in the art in reviewing Matsumoto et al.'s and Kobayashi's disclosures, would only have found suggestion to keep time(s) for each entity (whether it be a computer file or data stream), and would not have suddenly found suggestion to suddenly keep an ADDITIONAL set of times pertaining to a first recording time of a first still picture and a last recording time of a last picture of a GROUP of computer file entities. That is, since Matsumoto et al. already stores the list of still pictures belonging to the same group in chronological order", then it is respectfully submitted that if there is any suggestion, then it would be

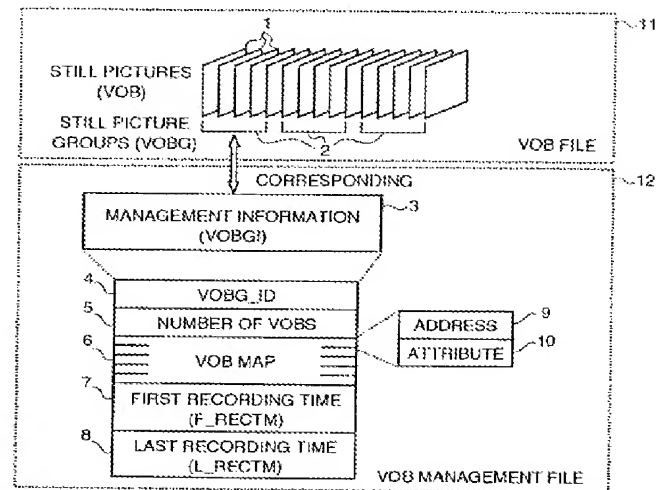
simply to use the first and last chronological entries AS THEY ARE PRESENTLY STORED in a listing of plural still pictures, rather than further complicating the arrangement, size, expense with a further separately-stored memory data containing only the first and last recording times.

In short, it appears that this most recent rejection is based upon an improper hindsight reconstruction approach where a single “video program” part of an irrelevant video program reference, is attempted to be interpreted as a “still picture group having a start time and end time”, and such teaching is then forcibly applied to a differing still picture art reference, attempting to arrive at Applicant’s claimed invention.

To summarize Applicant’s invention, as mentioned previously, Applicant teaches and claims an arrangement wherein if still picture management information containing management information for separate still picture computer files is provided (see **VOB map 6** in Applicant’s **FIG. 1**, reproduced herewith for convenience), Applicant’s “still picture group management information” **7, 8** providing **ONLY** the first recording time of the first

picture in the group and the last recording time of the last picture in the group, is provided **SEPARATE FROM** the still picture management information. Again, such is advantageous in that when one searches to see whether a picture (defined by a time) is

FIG. 1



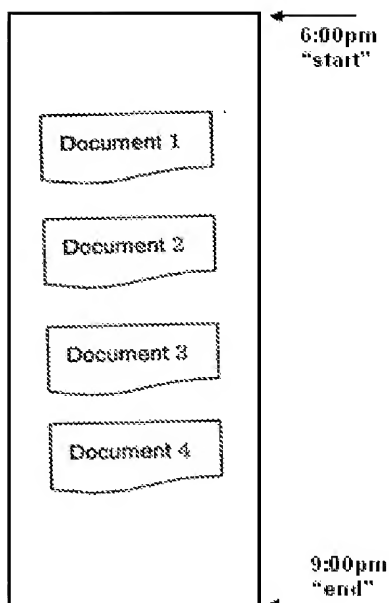
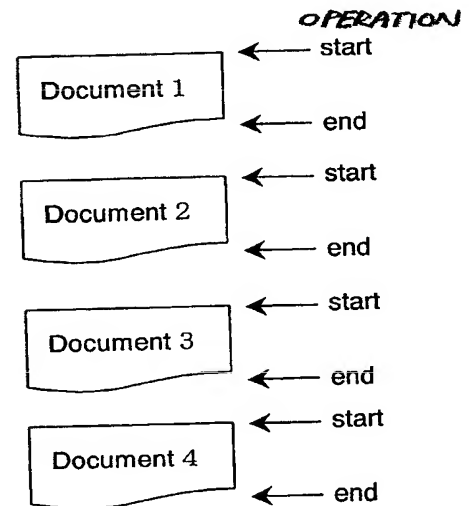
included within a group, one can quickly access the “still picture group management information” 7, 8 providing ONLY the first recording time and the last recording time of boundary pictures in the group, and compare times to make such determination. In short, very little data is accessed and compared with Applicant’s arrangement, in comparison to disadvantageous arrangements which access all data for all pictures as stored within a multitude of still picture files or within a table or database.

In an attempt to cure a major deficiency, the Office Action rejection further cites Miike et al. However, is likewise deficient in that, Miike et al. nowhere discloses or suggests any arrangement “said still picture group management information is provided SEPARATELY from any still picture management information containing management information for each still picture, and said still picture group management information has a data area for storing time data which specifies time information including ONLY a first recording time at which the still picture data of an earliest-photographed still picture in said still picture group was recorded first by a picture-taking device, and a last recording time at which the still picture data of a latest-photographed still picture in said still picture group was recorded last by the picture-taking device”. More particularly, Miike et al. does teach (column 47, lines 33-40, for example) saving a “production start time” and a “production end time” with respect to a produced “document”. However, a thorough understanding of the Miike et al. disclosure reveals that such teachings do not disclose or suggest Applicant’s claimed arrangement.

More particularly, it is respectfully submitted that Miike et al. **“document” is the same as a computer “file”, i.e., they are analogous.** So when Miike et al. speaks of “production start time” and a “production end time” with respect to a produced “document”, Miike et al. disclosure means that the time when production of **that particular document (or computer file)** is started, and the time when production of **that particular document (or computer file)** is completed, are saved with respect to **that document**. For example, if a user **starts** work at **6:00pm** on a word processing “document” and **completes** at **9:00pm**, then the **6:00pm “production start time”** and **9:00pm “production end time”** are saved with respect to that document (i.e., computer file).

If one were to take **four still pictures** at
1:00pm, 2:00pm, 3:00pm and 4:00pm, then still
picture files as examples of Miike et al.'s disclosed
"document" arrangement, would be represented by the
following sketch. That is, **each separate still picture**
would have its own "document" or computer file,
and **each separate still picture "document" would**
then have Miike et al.'s start time and end time
associated therewith.

Miike et al



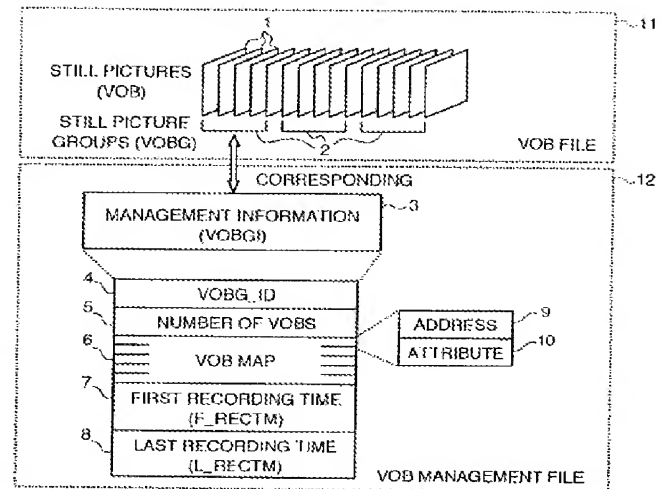
As another example, if a user were then to **start** work at
6:00pm on a **word processing "document" (or a PowerPoint**
slide show "document") incorporating the above four pictures
therein, and **complete** the "document" at **9:00pm**, then the
6:00pm "production start time" and 9:00pm "production
end time" of the word processing document are saved with
respect to that word processing (or PowerPoint) document
(i.e., computer file). Such may be represented as shown in
the attached sketch. The "start" and "end" times of the
incorporated still pictures **would not** be associated with the

"document". In short, Miike et al.'s "document" **does not adopt the start/end times of**
the still pictures.

Again, as mentioned previously, Applicant teaches and claims an arrangement wherein if still picture management information containing management information for separate still picture computer files is provided (see **VOB map 6** in Applicant's **FIG. 1**, reproduced herewith for convenience), Applicant's still picture group management information" 7, 8 providing ONLY the first recording time of the first picture in the group

and the last recording time of the last picture in the group, is provided **SEPARATE FROM** the still picture management information. Again, such is advantageous in that when one searches to see whether a picture (defined by a time) is included within a group, one can quickly access the "still picture group management information" 7, 8 providing ONLY the first recording time and the last recording time of boundary pictures in the group, and compare times to make such determination. In short, very little data is accessed and compared with Applicant's arrangement, in comparison to disadvantageous arrangements which access all data for all pictures as stored within a multitude of still picture files or within a table or database.

FIG. 1



No other previously-applied reference cures the major deficiencies mentioned above with respect to the above-discussed reference(s). Accordingly, it is respectfully submitted that the previously-applied references (whether taken individually, or in combination) would not have disclosed or suggested Applicant's claimed invention.

In addition to the foregoing, the following **additional remarks from Applicant's foreign representative** are also submitted in support of traversal of the rejection and patentability of Applicant's claims.

Office Action comments have alleged that Matsumoto discloses still picture group management information having a data area for storing time data which specifies time information including first recording time of an earliest-photographed still picture and a last recording time of a latest-photographed still picture. Office Action comments have also alleged that Matsumoto does not teach time information only includes a first and last recording time. Still further Office Action comments have alleged that Kobayashi discloses a time table (in Fig. 4) including information of a first recording time (recording start time) and the last recording time (recording end time) of a still picture.

Furthermore, Office Action comments have alleged that one of ordinary skill in the art at the time the invention was made would have been motivated to store only the first and last recording time information in still picture group management information as in Kobayashi in order to use the storage medium efficiently, and then would have been motivated to search for images as in Miike in Matsumoto because it would allow the user to perform effective search for the desired image.

Applicant respectfully traverses the Office Action allegations and opinion. More particularly, the data table shown in Fig. 4 of Kobayashi includes a time information for only the video data. Kobayashi does not concern time information of still picture data. If the time table for the video data is applied to the management information for the still picture data, the video data should be replaced with the still picture data in Kobayashi. The time information of video image (movie) data always include a recording start time and a recording end time of a video content. However, the time information of still picture data has no recording end time of the still picture, but only has a recording time (photographed time) of the still picture. Kobayashi does not teach the recording time of the last-photographed still picture. Matsumoto neither teaches nor requires a recording end time of the still picture and does not concern time information of video data. Accordingly, one of ordinary skill in the art at the time the invention would not have been motivated to store only the recording start time and recording end time information of the video data as in Kobayashi. Accordingly, the cited references Matsumoto, Kobayashi and Miike never teach that still picture group management information has a data area for storing time data which specifies time information only including first recording time of an earliest-photographed still picture and a last recording time of a latest-photographed still picture to search for still picture image to perform effective search for the desired image.

As a result of all of the foregoing, it is respectfully submitted that the applied art (taken alone and in the Office Action combinations) would not support a '103 obviousness-type rejection of Applicant's claims. Accordingly, reconsideration and withdrawal of such '103 rejection, and express written allowance of all of the '103 rejected claims, are respectfully requested.

EXAMINER INVITED TO TELEPHONE

The Examiner is herein invited to telephone the undersigned attorneys at the local Washington, D.C. area telephone number of 703/312-6600 for discussing any Examiner's Amendments or other suggested actions for accelerating prosecution and moving the present application to allowance.

RESERVATION OF RIGHTS

It is respectfully submitted that any and all claim amendments and/or cancellations submitted within this paper and throughout prosecution of the present application are without prejudice or disclaimer. That is, any above statements, or any present amendment or cancellation of claims (all made without prejudice or disclaimer), should not be taken as an indication or admission that any objection/rejection was valid, or as a disclaimer of any scope or subject matter. Applicant respectfully reserves all rights to file subsequent related application(s) (including reissue applications) directed to any/all previously claimed limitations/features which have been subsequently

amended or cancelled, or to any/all limitations/features not yet claimed, i.e., Applicant continues (indefinitely) to maintain no intention or desire to dedicate or surrender any limitations/features of subject matter of the present application to the public.

CONCLUSION

In view of the foregoing amendments and remarks, Applicant respectfully submits that the claims listed above as presently being under consideration in the application are now in condition for allowance.

To the extent necessary, Applicant petitions for an extension of time under 37 CFR '1.136. Authorization is herein given to charge any shortage in the fees, including extension of time fees and excess claim fees, to Deposit Account No. 01-2135 (Case No. 500.37453CX2) and please credit any excess fees to such deposit account.

Based upon all of the foregoing, allowance of all presently-pending claims is respectfully requested.

Respectfully submitted,

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